

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 79-157

NPDES NO. CA0027901

WASTE DISCHARGE REQUIREMENTS FOR:

LIQUID AIR INC.
UNION CITY, ALAMEDA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board) finds that:

1. Liquid Air, Inc., hereinafter called the discharger, operates a plant at 700 Decoto Road in Union City, Alameda County, for the manufacture of acetylene by reacting calcium carbide with water and produces liquid oxygen, nitrogen, and argon by air separation.
2. The discharger has submitted an application (NPDES Short Form C) for renewal of its expiring NPDES permit (Order No. 74-184). The current discharge is approximately 30,000 gallons per day of non-contact cooling water blowdown from two cooling towers, to a storm drain tributary to Alameda Creek. Process waste from acetylene manufacture, which was previously discharged, is now recycled. The cooling tower water is treated with an organic phosphate corrosion inhibitor and a biocide, and pH is controlled with sulfuric acid.
3. In April 1975, the Board adopted a Water Quality Control Plan for the San Francisco Bay Basin. The Basin Plan contains water quality objectives for Alameda Creek.
4. The beneficial uses of Alameda Creek and contiguous waters are:
 - a. Recreation
 - b. Fish migration and habitat
 - c. Habitat and resting for waterfowl and migratory birds
 - d. Industrial & municipal water supply
 - e. Esthetic enjoyment
5. Effluent limitation, national standards of performance, toxic and pretreatment effluent standards, and ocean discharge criteria established pursuant to Section 208(b), 301, 304 and 307 of the Federal Water Pollution Control Act and amendments thereto are applicable to the discharge.
6. The Board is not required to comply with the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (California Environmental Quality Act) as this order is an NPDES permit and is exempt from such provisions per section 13389 of the Water Code.

7. This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Water Pollution Control Act, or amendments thereto, and shall take effect at the end of ten days from date of hearing provided the Regional Administrator of the U. S. Environmental Protection Agency has no objections.
8. The Board has notified the discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
9. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that Liquid Air Inc., in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Federal Water Pollution Control Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. Effluent Limitations

1. The discharge of an effluent containing constituents in excess of the following limits is prohibited:

<u>Constituent</u>	<u>Units</u>	<u>30-Day Average</u>	<u>Maximum Daily</u>
Total suspended solids	lbs/day	7.5	11.3
	kg/day	3.4	5.1
	mg/l	30	45
Oil and grease	lbs/day	2.5	3.8
	kg/day	1.2	1.7
	mg/l	10	15

2. The discharge shall not have pH of less than 6.5 nor greater than 8.5.
3. In any representative set of samples the waste as discharged shall meet the following limit of quality:

TOXICITY:

The survival of test fishes in 96-hour bioassays of the effluent shall achieve a median of 90% survival for three consecutive samples and a 90 percentile value of not less than 70% survival for 10 consecutive samples.

4. The daily discharge rate is obtained from the following calculation for any calendar day:

$$\text{Daily discharge rate} = \frac{8.34}{N} \sum_{i=1}^N Q_i C_i$$

in which N is the number of samples analyzed in any calendar day. Q_i and C_i are the flow rate (MGD) and the constituent concentration (mg/l), respectively, which are associated with each of the N grab samples which may be taken in any calendar day. If a composite sample is taken, C_i is the concentration measured in the composite sample and Q_i is the average flow rate occurring during the period over which samples are composited.

5. The 30-day average discharge rate or concentration shall be the arithmetic average of all the daily values calculated using the results of analyses of all samples collected during any 30 consecutive calendar day period. If fewer than four samples are collected and analyzed during any 30 consecutive calendar day period, compliance with the 30-day average limitation shall not be determined.

B. Receiving Water Limitations

1. The discharge or waste shall not cause the following conditions to exist in water of the state at any place.
 - a. Floating, suspended, or deposited macroscopic particulate matter or foam;
 - b. Bottom deposits or aquatic growths;
 - c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
 - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;
 - e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:
 - a. Dissolved oxygen 5.0 mg/l minimum. Annual median - 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
 - b. Dissolved sulfide 0.1 mg/l maximum.
 - c. pH Variation from natural ambient pH by more than 0.5 pH units.

3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

C. Provisions

1. Neither the treatment nor the discharge of pollutants shall create a nuisance as defined in the California Water Code.
2. There shall be no chromium or other heavy metals added to the cooling water system.
3. The discharger shall comply with all provisions of this Order effective December 17, 1979.
4. The discharger shall maintain the plant yard and roof surfaces and storage or loading areas so as to prevent rainfall runoff from coming in contact with spilled, deposited, or stored materials which could cause rainwater runoff to become toxic or to contain pollutants.
5. The discharger shall review and update annually its contingency plan as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13337 of the California Water Code.
6. The discharger shall file with the Board a report of waste discharge at least 120 days before making any material change or proposed change in the character, location, or volume of the discharge.
7. The discharger shall file with the Board technical reports on self-monitoring work performed according to the detailed specifications contained in any Monitoring and Reporting Program as directed by the Executive Officer.
8. This Order includes all items except number 3 of the attached "Standard Provisions", dated August 8, 1973.
9. This Order expires on December 17, 1984, and the discharger must file a Report of Waste Discharge in accordance with Title 23, California Administrative Code, not later than 180 days in advance of such date as application for issuance of new waste discharge requirements.

10. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the discharger, the discharger shall notify the succeeding owner or operator of the existence of this Order by a letter, a copy of which shall be forwarded to this Board.

I, Fred H. Dierker, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on November 20, 1979.

FRED H. DIERKER
Executive Officer

Attachments:

Resolution 74-10
Standard Provisions 8/8/73
Self-Monitoring Program

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

LIQUID AIR, INC.

UNION CITY, ALAMEDA COUNTY

NPDES NO. CA 0027901

ORDER NO. 79-157

CONSISTS OF

PART A (dated 1/78)

AND

PART B

PART B

I. DESCRIPTION OF SAMPLING STATIONS

<u>Station</u>	<u>Description</u>
E-1	At any point in the outfall from the treatment facilities between the point of discharge and the point at which all waste tributary to that outfall is present.

II. SCHEDULE OF SAMPLING AND ANALYSIS

A. The schedule of sampling and analysis shall be that given as Table I.

I, Fred H. Dierker, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 79-157.
2. Does not include the following paragraphs of Part A:

C.3., C.4., C.5.a., C.5.c., C.5.d., C.5.e., D.1, D.3., D.4., E.2., E.4. and F.3.c.
3. Is effective on the date shown below.
4. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.

FRED H. DIERKER
Executive Officer

Attachment:
Table I

Effective Date _____

TABLE I
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSES

ORDER NO. 79-157

SAMPLING STATIONS	Effluent Station E								
	C-24	G	O						
Flow Rate (MGD)	Q	Q							
Settleable Matter (ml/l-hr. and cu. ft/day)		Q							
Total Suspended Matter (mg/l and kg/day)	Q								
Oil and Grease (mg/l and kg/day)		Q							
Fish Toxicity, 96-hr bioassay percent Survival in Undiluted Waste	Q								
pH (units)	Q								
Temperature (°C)	Q								
All Applicable Standard Observa- tions (see Part A, Section C.5.b)			O						

Type of Sample:

G = grab sample
C-24 = 24-hour composite sample
O = observation

Frequency of Sampling:

Q = one day each calendar quarter

Oil and Grease Sampling:

Shall consist of 3 grab samples taken at 8-hour intervals during the sampling day with each grab being collected in a glass container and analyzed separately. Results shall be expressed as a weighted average of the 3 values based upon the instantaneous flow rates occurring at the time of each grab sample. If the plant is not staffed 24 hours per day or if the discharge does not occur continuously, then the 3 grab samples may be taken at approximately equal intervals during the period that the plant is staffed or during the period that discharge is made.

In the event that sampling for oil and grease once every two weeks or less frequently shows an apparent violation of the waste discharge permit 30-day average limitation (considering the results of one or two days' sampling as a 30-day average), then the sampling frequency shall be increased to weekly so that a true 30-day average can be computed and compliance can be determined.